

CLAIMS

1. Dosage feed device, in particular for the dosage feed of an additive fluid in crude oil production, the dosage feed device comprising:

a dosing element, which can be adjusted by an adjustment device, and

the dosing element including a dosing gap and a valve device arranged following the dosing gap in direction of fluid flow of the additive fluid.

2. Dosage feed device according to claim 1, wherein an opening area of the dosing gap is variable.

3. Dosage feed device according to claim 1, wherein the dosing gap is formed between a dosing cone and counter element, whereby the dosing cone and counter element are movable relative to one another.

4. Dosage feed device according to claim 3, wherein the dosing cone is formed as the end section of a displaceable sleeve, the said end section appearing conical in the direction of fluid flow, whereby at least the end section is arranged for displacement in a guide sleeve as the counter element.

5. Dosage feed device according to claim 1, wherein the dosing gap is formed ring-shaped.

6. Dosage feed device according to claim 4, wherein a guide section of the displaceable sleeve is supported for displacement in a support sleeve between an extended position and a withdrawn position.

7. Dosage feed device according to claim 6, wherein the displaceable sleeve is subject to spring pressure in the direction of the withdrawn position.

8. Dosage feed device according to claim 6, wherein an especially annular stop protrudes radially outwards from the displaceable sleeve for defining the withdrawn position on the support sleeve.
9. Dosage feed device according to claim 6, wherein a compression spring is arranged between the support sleeve and a first sleeve end of the displaceable sleeve.
10. Dosage feed device according to claim 9, wherein a support ring is arranged on the first sleeve end.
11. Dosage feed device according to claim 4, wherein a valve-seat sleeve is arranged between the valve device and the dosing gap in a flow channel, on which a valve element of the valve device contacts on one side in a valve-closed position.
12. Dosage feed device according to claim 11, wherein the valve device is a non-return valve which is subject to spring pressure in the direction of the valve-seat sleeve.
13. Dosage feed device according to claim 11, wherein the valve element is a spherical valve element that contacts an opening edge of the valve-seat sleeve, sealed tightly against fluids, in the valve-closed position.
14. Dosage feed device according to claim 11, wherein a spacer sleeve is arranged between the valve-seat sleeve and the guide sleeve.
15. Dosage feed device according to claim 11, wherein the valve element is arranged in a cup-shaped element receptacle, between which and an inner side of a housing hole at least one fluid opening is formed.
16. Dosage feed device according to claim 1, wherein the dosing gap includes a certain opening area in a withdrawn position of the displaceable sleeve.

17. Dosage feed device according to claim 14, wherein an actuating plunger is supported for displacement within the displaceable sleeve, spacer sleeve and valve-seat sleeve, which is in contact with the valve element at its support end.
18. Dosage feed device according to claim 17, wherein the actuating plunger is movably connected to the adjustment device with its moving end remote from its support end.
19. Dosage feed device according to claim 18, wherein the movable end protrudes by a certain delay length out of the first sleeve end of the displaceable sleeve.
20. Dosage feed device according to claim 9, wherein at least one additive fluid guide opens into an annular space of a flow channel between the guide sleeve and the support sleeve.
21. Dosage feed device according to claim 20, wherein at least one connecting hole penetrates the support sleeve in the direction of the first sleeve end from the annular space.
22. Dosage feed device according to claim 1, wherein the adjustment device exhibits at least a spindle drive, a reduction gear, in particular in the form of a so-called harmonic drive, a helically toothed spur gear and a drive motor.
23. Dosage feed device according to claim 22, wherein the spindle drive exhibits a rotatable, but axially undisplaceable spindle nut and a rotationally rigid, but axially displaceable threaded spindle.
24. Dosage feed device according to claim 23, wherein a code carrier of a position sensor is assigned to the threaded spindle.
25. Dosage feed device according to claim 1, wherein a device housing includes a number of insertion bevels on the outer side of its housing.